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**Remarks**

Claims 1-14 are pending in this application. Reconsideration and allowance of the application are respectfully requested.

The non-final Office Action dated December 11, 2006 indicated an objection to the specification (section headings), a claim objection (with reference to FIG. 2), and listed the following rejections: claim 13 stand rejected under 35 U.S.C. § 101; claims 1-10 stand rejected under 35 U.S.C. § 112(2); claims 1-2 and 13-15 stand rejected under 35 U.S.C. § 103(a) over Okandan *et al.* (U.S. 6,348,806) in view of Wang (U.S. 6,845,480); and claims 3, 6-7 and 12 stand rejected under 35 U.S.C. § 103(a) over Okandan in view of Wang and further in view of Krishnan *et al.* (U.S. 5,535,015).

Regarding the request to add section headings, Applicant respectfully declines to add section headings to the specification because the indicated suggestions in 37 C.F.R. § 1.77(b) are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 C.F.R. § 1.51(d) are only guidelines that are suggested for applicant's use. They are not mandatory, and when Rule 77 was amended in 1996 (61 FR 42790, Aug. 19, 1996), Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, stated in the Official Gazette:

"Section 1.77 is permissive rather than mandatory. ... 1.77 merely expresses the Office's preference for the arrangement of the application elements. The Office may advise an applicant that the application does not comply with the format set forth in 1.77, and suggest this format for the applicant's consideration; however, the Office will not require any application to comply with the format set forth in 1.77."

In view of the above, Applicant prefers not to add section headings.

Regarding the claims objections, the Office Action has not cited any basis (e.g., from the M.P.E.P. or otherwise) in support of the claims objections. Applicant submits that with such support the Office Action has no basis for maintaining the claim objections. The objections appear to be based upon the subject matter of the claims not on the format of the claims, thus a rejection (which requires a basis) not an objection would be proper. *See, e.g.,* M.P.E.P. § 706.01. Thus, Applicant requests that the claim objections be withdrawn.

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Applicant respectfully traverses the Section 101 rejection of claim 13 because the claimed subject matter produces tangible results. For example, the claim limitations directed to supplying a pass/fail signal (*i.e.*, an output) produces a tangible result (*i.e.*, the pass/fail signal). The Office Action appears to be applying a standard from M.P.E.P. § 2106(IV)(C), which is directed to the judicial exception to Section 101. This judicial exception is based upon whether the claimed invention is a practical application of an abstract idea, law of nature, or natural phenomenon. However, claim 13 is directed to testing a physical circuit and as such is unrelated to this judicial exception. Moreover, a number of tangible results occur during and after the testing of the circuit, such as supplying power and clock pulses to the circuit. Thus, the Section 101 rejection of claim 13 is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses the Section 112(2) rejection of claims 1-10 because the claims do not fail to interrelate essential elements of the invention as required by M.P.E.P. § 2172.01. The claim elements are functionally interrelated by the claim limitations, as is acknowledged by the Office Action. The Office Action then asserts that "the elements must be structurally related (recited as "coupled" or "connected") in order for the functional recitations to carry patentable weight." *See* page 5 of the instant Office Action. However, M.P.E.P. § 2172.01 merely requires that the essential claim elements be interrelated, it does not differentiate between functional and structural interrelations. Moreover, there is a substantial body of case law, (available upon request) which dismisses the notion that the claimed elements must be structurally related. Thus, claims 1-10 are in compliance with M.P.E.P. § 2172.01 in that the claim elements are functionally interrelated by the claim limitations. The Office Action fails to provide any support for the assertion that claim elements must be structurally related in order for the functional recitations to carry patentable weight. Accordingly, the Section 112(2) rejection of claims 1-10 is improper and Applicant request that it be withdrawn.

Regarding the Section 112(2) rejection of claims 2, 7 and 8 based on antecedent basis issues, Applicant has amended these claims as indicated on pages 2 and 3 of this paper. Thus, Applicant requests that this rejection be withdrawn. Applicant notes (after a thorough review of the claims) that minor amendments have also been made to claims 3, 13 and 14 to improve readability. These amendments are not being made to overcome

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any of the objections or any of the rejections raised by the Office Action, all of which fail for the reasons discussed herein.

Applicant respectfully traverses the Section 103(a) rejections of claims 1-3, 6-7 and 12-14 because the cited portions of the Okandan '806 reference do not correspond to claim limitations directed to counting the clock pulses during a clock period to obtain a count number. The Office Action asserts that Okandan's counter 54 counts clock pulses of clock signal  $F_{REF}$ . However, the cited portions of Okandan teach that counter 54 is incremented by the output of flip-flop 60 for the duration of the period of  $F_{REF}$ , thus counter 54 performs a count for each period of  $F_{REF}$ . *See, e.g.* Figure 3 and Col. 4:38-62. As such, Okandan's counter 54 counts the output of flip-flop 60 during each period of  $F_{REF}$ , counter 54 does not count the clock pulses of  $F_{REF}$  as in the claimed invention.

Moreover, the cited portions of the Okandan reference further fail to correspond to claim limitations directed to the end of the count period being determined by the instant that the voltage at the terminal crosses the reference value. The Office Action cites to Okandan's comparator 62, which compares the voltage at a terminal of device under test 52 to a reference voltage  $V_{Ref}$ . However, as discussed above, Okandan's counter 54 performs a count for each period of  $F_{REF}$ , thus the end of Okandan's count period is determined by the end of the period of  $F_{REF}$ , not by when the voltage at a terminal of device under test 52 crosses reference voltage  $V_{Ref}$  as in the claimed invention. *See, e.g.* Figure 3 and Col. 4:38-62. In actuality, the Okandan reference teaches counting the number of times that the voltage at a terminal of device under test 52 crosses reference voltage  $V_{Ref}$  during the count period. In view of the above, the Section 103(a) rejections of claims 1-3, 6-7 and 12-14 are improper and Applicant requests that they be withdrawn.

Applicant further traverses the Section 103(a) rejections of claims 1-3, 6-7 and 12-14 because the Office Action fails to address claim limitations directed to controlling the value of the reference number and/or a clock frequency of the clock pulses in dependence on process parameters of the circuit under test. None of the cited references teach or suggest controlling test parameters based on process parameters of the circuit under test. The Office Action acknowledges that Okandan does not disclose controlling the value of the reference number; the Office Action then asserts that the practice of

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using a control circuit to control the nature of a signal is well known in the art as taught by Wang. *See, e.g.*, page 7, lines 11-22 of the instant Office Action. Irrespective of the propriety of this assertion, the Office Action fails to cite to, or even allege that any portion of the Okandan and Wang references teach or suggest that the value of the reference number and/or a clock frequency of the clock pulses be controlled based on process parameters of the circuit under test as required by the claim limitations. As such, the Office Action fails to assert correspondence between the cited references and all of the claim limitations as required. Accordingly, the Section 103(a) rejections of claims 1-3, 6-7 and 12-14 are improper and Applicant requests that they be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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